

**Claims**

1. A method for controlling a power amplifier in a power amplifier system, said power amplifier system including a loop by which a parameter proportional to output power of the power amplifier is sensed and fed to an error amplifier, and the output of the error amplifier is fed to a control input of the power amplifier as a control signal, the method comprising adding an extra gain to the loop.

2. The method according to Claim 1, wherein said extra gain is proportional to said control signal.

3. The method according to Claim 2, wherein said parameter proportional to output power comprises current.

4. The method according to Claim 1 wherein said extra gain maintains said loop in an active state at all times.

5. The method according to Claim 1, wherein said power amplifier system is utilized in a mobile terminal of a wireless communications system.

6. The method according to Claim 5, wherein said mobile terminal is a cellular telephone.

7. The method according to Claim 5, wherein said wireless communications system operates in accordance with GSM specifications.

8. A power amplifier system comprising:

5 a power amplifier for amplifying a signal;

a control circuit for controlling said power amplifier, said control circuit including a loop for sensing a parameter proportional to output power of said power amplifier and feeding it back to an error amplifier, the output of which is fed to a control input of said power amplifier as a control signal; and

10 said control circuit further including circuitry for adding extra gain to said loop.

9. The power amplifier system according to Claim 8, wherein said extra gain is proportional to said control signal.

15 10. The power amplifier system according to Claim 9, wherein said parameter comprises current.

11. The power amplifier system according to Claim 10, wherein said system is incorporated in a mobile terminal of a wireless communications system.

20